Name: Date:

PCW_09_22 Coordinate transformations v19

Question 1

Consider the two functions f and g, where g is defined as a transformation of f:

$$g[x] \;=\; \frac{f\left[\frac{x+6}{9}\right]+5}{8}$$

For point (a, b) on curve f there is a corresponding point on the curve g. Write the coordinate transformation.

$$(a, b) \rightarrow \left(9a-6\;,\;\frac{b+5}{8}\right)$$

Question 2

Consider the two functions f and g, where g is defined as a transformation of f:

$$g[x] \;=\; \frac{f[6x+8]-2}{4}$$

For point (a, b) on curve f there is a corresponding point on the curve g. Write the coordinate transformation.

$$(a, b) \rightarrow \left(\frac{a-8}{6}\;,\;\frac{b-2}{4}\right)$$

Question 3

Consider the two functions f and g, where g is defined as a transformation of f:

$$g[x] \;=\; 9\cdot\left(f\left[\frac{x}{4}+6\right]+5\right)$$

For point (a, b) on curve f there is a corresponding point on the curve g. Write the coordinate transformation.

$$(a, b) \rightarrow (4\,(a-6)\;\;,\;\;9\,(b+5))$$

PCW_09_22 Coordinate transformations v19

Question 4

Consider the two functions f and g, where g is defined as a transformation of f:

$$g[x] \;=\; \frac{f[5\,(x-2)]}{8} - 9$$

For point (a, b) on curve f there is a corresponding point on the curve g. Write the coordinate transformation.

$$(a, b) \to \left(\frac{a}{5} + 2\;,\; \frac{b}{8} - 9\right)$$

Question 5

Consider the two functions f and g, where g is defined as a transformation of f:

$$g[x] \;=\; 7 \cdot f[3\,(x+5)] + 4$$

For point (a, b) on curve f there is a corresponding point on the curve g. Write the coordinate transformation.

$$(a, b) \to \left(\frac{a}{3} - 5\;,\; 7b + 4\right)$$

Question 6

Consider the two functions f and g, where g is defined as a transformation of f:

$$g[x] \;=\; 7 \cdot \left(f\left[\frac{x-4}{6}\right] - 9\right)$$

For point (a, b) on curve f there is a corresponding point on the curve g. Write the coordinate transformation.

$$(a, b) \to (6a + 4\;,\; 7\,(b-9))$$